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Water Supply Project

Environmental Impact Assessment Report (EIAR)

Volume 6 of 6: Appendices

(Appendix 8.10) Lepidoptera Survey Report

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Contents

1. Introduction

1. A survey of the insects at two sites, the Raw Water Intake and Pumping Station site at Parteen Basin in the townland of Garrynatineel and the Water Treatment Plant site in the townland of Incha Beg, Co. Tipperary, was carried out in August 2020 in order to assess the entomological component of their biological biodiversity.

2. Methods

2. The woodland and its grassy and riverine margins at Garrynatineel (IGR W700701) were surveyed on the afternoon of 10th August. In addition to adult insects, immature stages were recorded from leaf-mines on their respective foodplants. A similar survey followed at the Incha Beg site (R726705). 15W Actinic traps were placed at both sites overnight and visited the flowing morning. Further fieldwork was carried out at Garrynatineel on the morning of August 11th.

3. Results

3. Three species of moth were records at the Garrynatineel light-trap. The actinic light-trap placed at Incha Beg, near Birdhill failed to operate on the night of August 10th/11th. It is not known why this failure occurred; no fault was found, and the trap had been functioning satisfactorily up to this date. As a result, only a few species were recorded by day at this site. A full list of the insects recorded is presented below.

3.1 LEPIDOPTERA – Butterflies & Moths

Family Nepticulidae (PYGMY LEAF-MINING MOTHS)

- *Stigmella aurella* (Fabricius, 1775). Vacated mines in *Rubus fruticosus* agg., Garrynatineel, W700701, 10.viii.2020.
- *Stigmella floslactella* (Haworth, 1828). Vacated mine on *Corylus avellana*, Garrynatineel, W700701, 11.viii.2020.
- *Stigmella hybnerella* (Hübner, 1794). Vacated Mine on *Crataegus monogyna*, Incha Beg. R726705, 10.viii.2020.
- *Stigmella microtheriella* (Stainton, 1854). Vacated mine on *Corylus avellana*, Garrynatineel, W700701, 10.viii.2020.

Family Momphidae

- *Mompha langiella* (Hübner, 1796). Vacated mine on *Circaea lutetiana*, Garrynatineel, W702703, 10.viii.2020.
- *Mompha terminella* (Humphreys & Westwood, 1845). Vacated mine on *Circaea lutetiana*, Garrynatineel, W700701, 10.viii.2020.

Family Crambidae

- *Agriphila straminella* ([Denis & Schiffermüller], 1775). One, grassy shoreline bank, Garrynatineel, W699700, 11.viii.2020; *circa* 15. Incha Beg, R726705, 10.viii.2020.
- *Agriphila tristella* ([Denis & Schiffermüller], 1775). Three, grassy shoreline bank, Garrynatineel, W699700, 11.viii.2020; one, Incha Beg. R726705, 10.viii.2020.
- *Nymphula nitidulata* (Hufnagel, 1767) BEAUTIFUL CHINA-MARK. Several, lakeshore, Garrynatineel, W799700, 10.viii.2020 & 11.viii.2020.

Family Pieridae (BUTTERFLIES – "WHITES")

- *Pieris napi* (Linnaeus, 1758) GREEN-VEINED WHITE. One, Incha Beg. R726705, 10.viii.2020.

Family Nympahlidae (BUTTERFLIES – "NYMPHALIDS & "BROWNS")

- *Maniola jurtina* (Linnaeus, 1758) MEADOW BROWN. One, grassy shoreline bank, Garrynatineel, W699700, 11.viii.2020.
- *Pararge aegeria* (Linnaeus, 1758) SPECKLED WOOD. Two, Garrynatineel, W700701, 11.viii.2020.
- *Vanessa atalanta* (Linnaeus, 1758) RED ADMIRAL. Larva on *Urtica dioica*, Garrynatineel, W700701, 11.viii.2020.

Family Notodontidae (PROMINENTS)

- *Pheosia gnoma* (Fabricius, [1777]) LESSER SWALLOW PROMINENT. One at 15W Actinic light-trap, Garrynatineel, 11th August 2020.

Family Erebidae (TIGER MOTHS & FOOTMAN MOTHS)

- *Eilema depressa* (Esper, [1787]) BUFF FOOTMAN. One at 15W Actinic light-trap, Garrynatineel, 11th August 2020

Family Noctuidae (NOCTUID MOTHS)

- *Noctua janthe* (Borkhausen, 1792) LESSER BROAD-BORDERED YELLOW UNDERWING. One at 15W Actinic light-trap, Garrynatineel, 11th August 2020

3.2 ODONATA (Dragonflies & Damselflies)

- *Enallagma cyathigerum* (Charpentier, 1840) COMMON BLUE DAMSELFLY. Five males, lakeshore, Garrynatineel, W799700, 10.viii.2020 & 11.viii.2020.

3.3 DIPTERA – Family Syrphidae (hoverflies)

- *Leucozona glaucia* (Linnaeus, 1758). One, Garrynatineel, 10th August 2020
- *Helophilus pendulus* (Linnaeus, 1758). One, Garrynatineel, 10th August 2020

Family Agromyzidae (leaf-mining flies)

- *Phytomyza ilicis* (Curtis, 1846) HOLLY LEAF MINER. Several mines on *Ilex aquifolium*, Garrynatineel, W700701, 11.viii.2020.
- *Chromatomyia aprilina* Goureau, 1851. Mine on *Lonicera periclymenum*, Garrynatineel, W700701, 11.viii.2020.

3.4 HEMIPTERA – Family Pentatomidae (Shieldbugs)

- *Picromeris bidens* (Linnaeus, 1758) SPIKED SHIELDBUG. One, Garrynatineel, 11th August 2020.

4. Discussion

4. The numbers and diversity of insects recorded at the Parteen site do not indicate a site of high biodiversity value. The woodland consists largely of mature conifers, with a scattering of hardwoods such as Hazel (*Corylus avellana*) and Holly (*Ilex aquifolium*), and a number of mature oaks (*Quercus sp*(p.)) extending diagonally NW-SE across the central part of the wood. As these oaks are surrounded by mature conifers it was difficult to sample any insects which may have occurred on them. The mature oaks are likely to support many insect species, and probably represent the most valuable biodiversity aspect of the site, but the presence of large mature conifers surrounding them limits their ecological value. The presence of substantial

amounts of Enchanter's nightshade (*Circaea lutetiana*) in parts of the woodland suggest a continuity of deciduous woodland. The riverbank and its vegetation produced a number of specimens *Nymphula nitidula*, a moth with an aquatic larva, but no other Irish species in this category was observed. Among the Odonata, only one species was recorded; *Enallagma cyathigerum*, a widespread and common species. Although the relatively late date of sampling means that many insect species would have finished their flight season, the results seem meagre in terms of biodiversity.

5. The Incha Beg site consists of rather damp agricultural pastureland with hedgerows and a few mature trees. Few insects were observed here, but the failure of the light-trap meant that sampling was very limited. The entire site was grazed by cattle. No suitable habitat for rare or protected lepidoptera species was recorded. The biodiversity value of the site is of local importance. Thus, repeat surveys were not required due to the lack of potential for rare or protected lepidoptera species.